```
    4                                              10    @15    18
    O                          CH═══CH         9  C   11  C   16  C.
    ║                          @7    8            C         C         C   19
  2 C═══O─── CH2─── G1                            C         C    C    C
    3       5       6                          14 C    .  C    12  17  C.  20
                                                    C                C
                                                   13                21
```

```
     @23
      C    24
22   C      C
   C          C
27 C          C 25
      C
     26
```
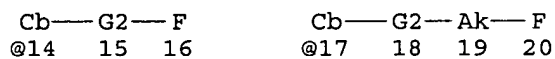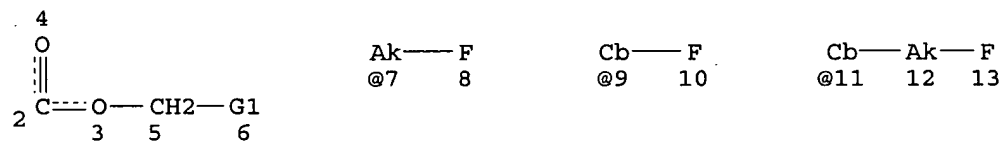
VAR G1=7/15/23
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

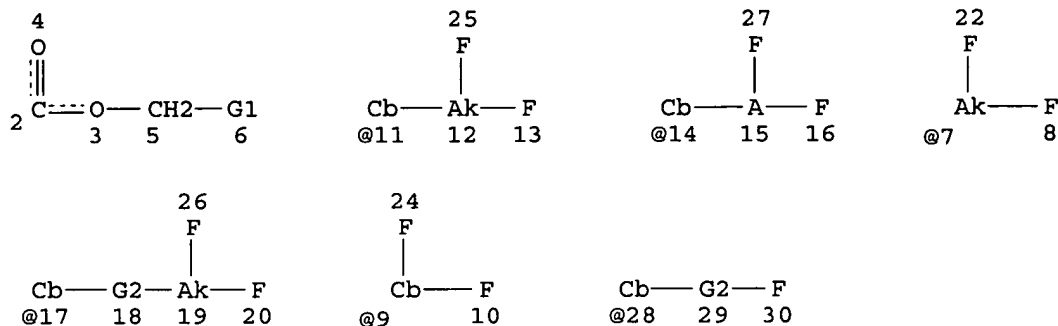GRAPH ATTRIBUTES:
RSPEC   9   22
NUMBER OF NODES IS   26

STEREO ATTRIBUTES: NONE
L36   SCR 1968
L38   35612 SEA FILE=REGISTRY SSS FUL L35 AND L36
L39   STR

```
    4
    O                   Ak─── F        Cb─── F        Cb─── Ak─── F
    ║                   @7    8        @9    10       @11   12    13
  2 C═══O─── CH2─── G1
    3       5       6
```

```
   Cb─── G2─── F        Cb─── G2─── Ak─── F
   @14   15    16       @17   18    19    20
```

VAR G1=7/9/11/14/17
VAR G2=O/S/N/C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
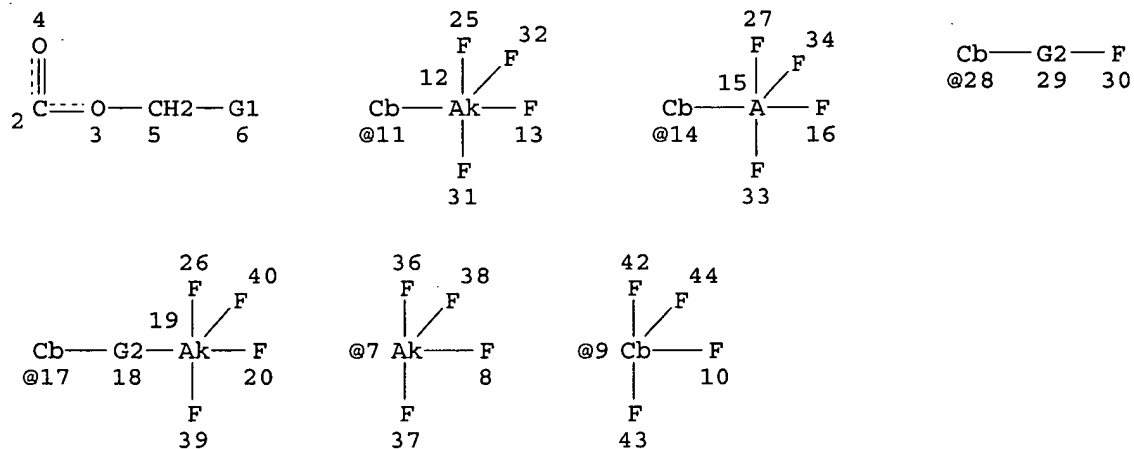RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   19

STEREO ATTRIBUTES: NONE
L41   7096 SEA FILE=REGISTRY SUB=L38 SSS FUL L39
L42   STR

```
    4                        25                    27                    22
    O                        F                     F                     F
    ||                       |                     |                     |
  2 C═══O──CH2──G1       Cb──Ak──F            Cb──A──F              Ak──F
    3   5   6            @11 12  13           @14 15 16            @7    8
```

```
            26                   24
            F                    F
            |                    |
   Cb──G2──Ak──F           Cb──F              Cb──G2──F
   @17 18  19  20          @9   10            @28 29  30
```

VAR G1=7/9/11/14/17/28
VAR G2=O/S/N/C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   27

STEREO ATTRIBUTES: NONE
L44   4708 SEA FILE=REGISTRY SUB=L41 SSS FUL L42
L45 .   STR

```
    4                        25   32                 27   34
    O                        F   F                   F   F
    ||                    12 | /                   15 | /
  2 C═══O──CH2──G1        Cb──Ak──F              Cb──A──F            Cb──G2──F
    3   5   6             @11 |    13            @14 |   16          @28 29  30
                             F                      F
                             31                     33
```

```
        26  40                36  38                42  44
        F  F                  F  F                  F  F
     19 | /                   | /                   | /
  Cb──G2──Ak──F           @7 Ak──F              @9 Cb──F
  @17 18  |   20              |   8                 |   10
          F                   F                     F
          39                  37                    43
```

VAR G1=7/9/11/14/17/28
VAR G2=O/S/N/C
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   37

STEREO ATTRIBUTES: NONE
L47   3542 SEA FILE=REGISTRY SUB=L44 SSS FUL L45
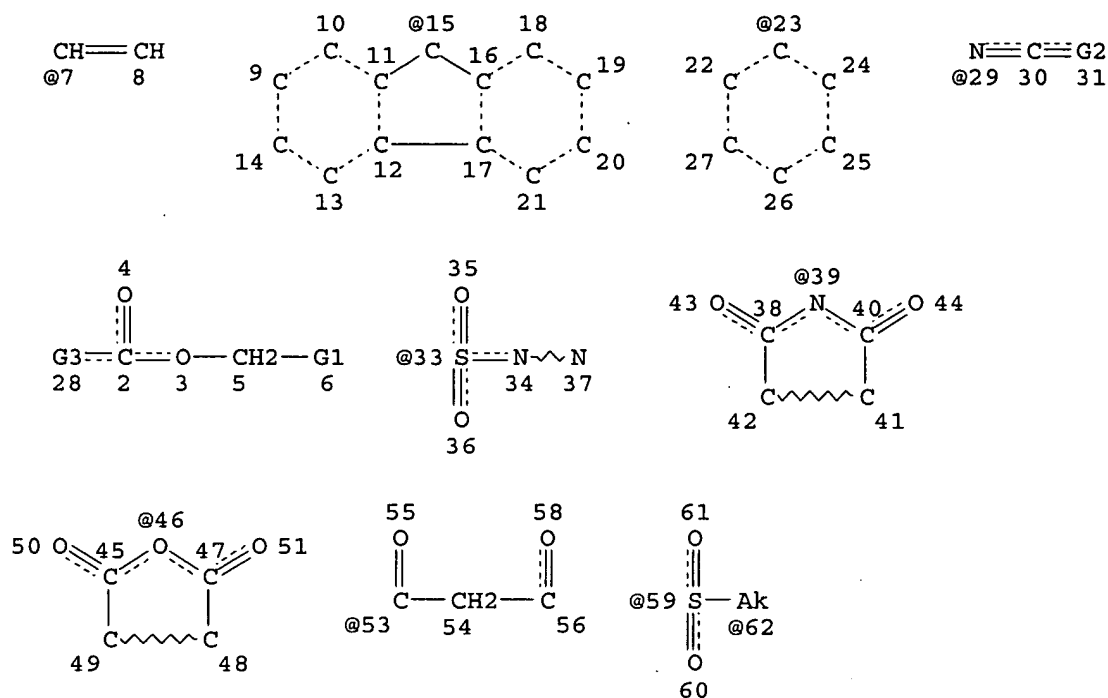L48   3179 SEA FILE=REGISTRY ABB=ON PLU=ON L47 NOT (PMS OR MXS)/CI
L49   72 SEA FILE=REGISTRY ABB=ON PLU=ON L48 AND NC4/ES
L50   6 SEA FILE=REGISTRY ABB=ON PLU=ON L49 AND (C18H14F9NO5 OR
                    C20H14F13NO5 OR C23H14F19NO5 OR C22H14F17NO5 OR C29H18F17NO5
                    OR C13H10F3NO5)

L54   STR

VAR G1=7/15/23
VAR G2=O/S
VAR G3=X/59/62/33/29/53/39/46
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC   9 22 38 45
NUMBER OF NODES IS   58

STEREO ATTRIBUTES: NONE
L57   130 SEA FILE=REGISTRY SUB=L38 SSS FUL L54
L58   23 SEA FILE=REGISTRY ABB=ON   PLU=ON   L57 AND L41
L59   3 SEA FILE=REGISTRY ABB=ON   PLU=ON   L58 AND (C19H12CLF17O2 OR
                   C18H8CLF17O2 OR C18H10CLF17O2)
L60   9 SEA FILE=REGISTRY ABB=ON   PLU=ON   (L50 OR L59)

=> d his 160-

     (FILE 'REGISTRY' ENTERED AT 07:13:23 ON 12 APR 2005)
L60   9 S L50,L59
                   SAV TEMP L60 SHIAO617A5/A
L61   7 S L60 NOT L26

     FILE 'HCAOLD' ENTERED AT 07:55:25 ON 12 APR 2005
L62   0 S L61

     FILE 'HCAPLUS' ENTERED AT 07:55:28 ON 12 APR 2005
L63   6 S L61
L64   1 S L63 AND L1-L12
L65   4 S L63 AND (PD<=20020711 OR PRD<=20020711 OR AD<=20020711)
L66   5 S L64,L65
L67   1 S L63 NOT L66
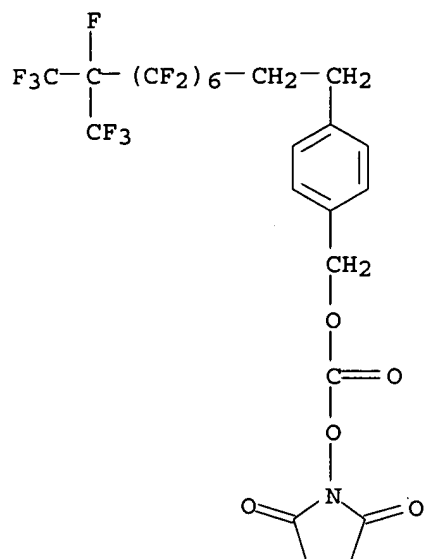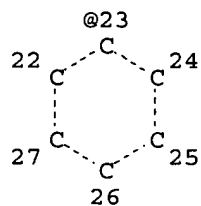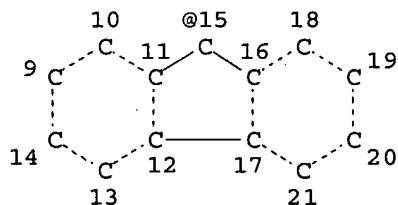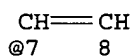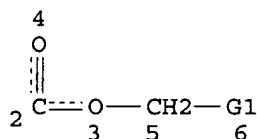
F$_3$C—C—(CF$_2$)$_6$—CH$_2$—CH$_2$

with F above the C, CF$_3$ below

[chemical structure diagram: para-substituted benzene ring with CH$_2$—O—C(=O)—O—N succinimide]

=> => d sta que 180
L35   STR

4
O
‖
2 C═O—CH2—G1
    3   5   6

CH═CH
@7   8

[structure diagram with atoms numbered 9–21]
10   @15   18
C   11   C   16   C
9 C   C   C 19
  C   C   C
14   12   17   20
  C   C
  13   21

@23
C
22 C   24
  C   C
27 C   C 25
    C
    26

VAR G1=7/15/23
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC   9   22
NUMBER OF NODES IS   26

STEREO ATTRIBUTES: NONE
L36   SCR 1968
L38   35612 SEA FILE=REGISTRY SSS FUL L35 AND L36
L77   STR

```
    4
    O
    ‖
  2 C═O── CH2─G1
     3   5   6
```
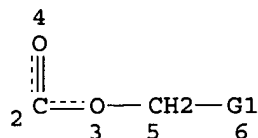
```
  Cb── Si── F        Cb── Si── Ak── F
  @14  15  16        @17  18  19  20
```

VAR G1=14/17
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 12

STEREO ATTRIBUTES: NONE
L78　　　　　　12 SEA FILE=REGISTRY SUB=L38 SSS FUL L77
L79　　　　　　 3 SEA FILE=REGISTRY ABB=ON PLU=ON L78 AND 1/CL
L80　　　　　　 1 SEA FILE=REGISTRY ABB=ON PLU=ON L79 AND C32H18CLF3O2SI

=> d his 180-

　　　(FILE 'REGISTRY' ENTERED AT 07:57:42 ON 12 APR 2005)
L80　　　　　　 1 S L79 AND C32H18CLF3O2SI

　　　FILE 'HCAPLUS' ENTERED AT 08:08:54 ON 12 APR 2005
L81　　　　　　 2 S L80

=> d all hitstr tot

L81　ANSWER 1 OF 2　HCAPLUS　COPYRIGHT 2005 ACS on STN
AN　　2004:57304　HCAPLUS
DN　　140:127844
ED　　Entered STN:　23 Jan 2004
TI　　Preparation of fluorinated silica gel support material for palladium
　　　catalyzed coupling reactions
IN　　Bannwarth, Willi; Tzschucke, Carl Christoph; Glatz, Heiko; Schwinn,
　　　Dominik
PA　　Albert-Ludwigs-Universitaet Freiburg, Germany
SO　　Ger., 19 pp.
　　　CODEN: GWXXAW
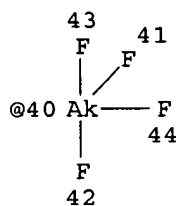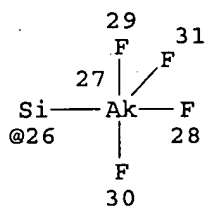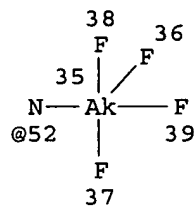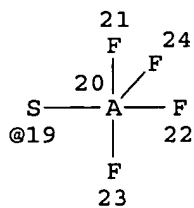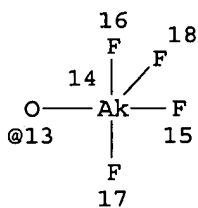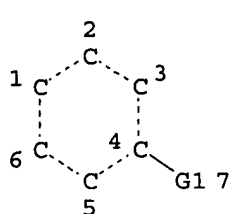DT　　Patent
LA　　German
IC　　ICM　C07F007-08
　　　ICS　C07B037-00; C07B061-00
CC　　21-2 (General Organic Chemistry)
　　　Section cross-reference(s): 35, 66
FAN.CNT 1
```

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|---|
| PI | DE 10235225 | B3 | 20040122 | DE 2002-10235225 | 20020801 |
| | WO 2004013068 | A1 | 20040212 | WO 2003-EP7592 | 20030714 |

```
　　　W:　AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
　　　　　CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
　　　　　GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
```

```
    2                16               21               38
    C.              F   18           F   24           F   36
1 C    C 3      14  | /  F       20  | /  F       35  | /  F
       |        O——Ak——F      S——A——F        N——Ak——F
6 C    C 4      @13 |   15      @19 |   22      @52 |   39
    C   G1 7         F               F               F
    5               17              23              37


        29              43
        F   31          F   41
    27  | /  F          | /  F
   Si——Ak——F       @40 Ak——F
   @26  |   28          |   44
        F               F
        30              42
```

VAR G1=13/19/52/26/40
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RSPEC   4
NUMBER OF NODES IS   36

STEREO ATTRIBUTES: NONE
L70   2012368 SEA FILE=REGISTRY ABB=ON   PLU=ON   46.150.18/RID AND F/ELS
L72   SCR 1044
L74   37805 SEA FILE=REGISTRY SUB=L70 SSS FUL L68 AND L36 AND L72
L88   STR

```
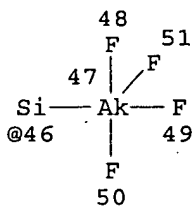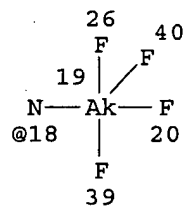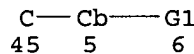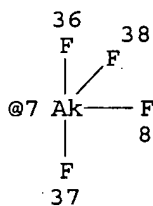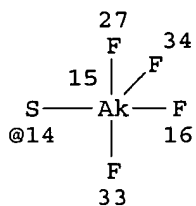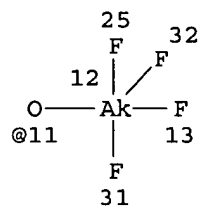    25              27              36
    F   32          F   34         F   38           C——Cb——G1
12  | /  F      15  | /  F         | /  F           45   5    6
O——Ak——F       S——Ak——F       @7 Ak——F
@11 |   13      @14 |   16          |   8
    F               F               F
    31              33              37


    26              48
    F   40          F   51
19  | /  F      47  | /  F
N——Ak——F       Si——Ak——F
@18 |   20      @46  |   49
    F               F
    39              50
```

VAR G1=7/11/14/18/46
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY UNS AT   5
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS   32

STEREO ATTRIBUTES: NONE
L89   16283 SEA FILE=REGISTRY SUB=L74 SSS FUL L88

L91   STR

```
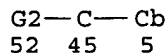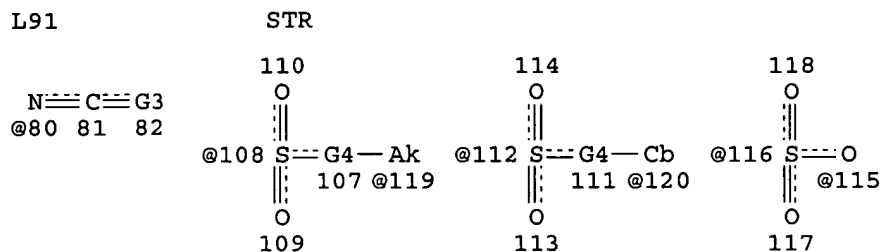              110           114           118
 N≡C≡G3        O             O             O
 @80 81 82     ‖             ‖             ‖
         @108 S—G4—Ak  @112 S—G4—Cb  @116 S≡O
              ‖ 107 @119      ‖ 111 @120     ‖ @115
              O             O             O
              109           113           117
```

```
 G2—C—Cb
 52 45  5
```

VAR G2=X/119/108/120/112/116/115/80/SH/OH/NH2
VAR G3=O/S
REP G4=(0-1) O
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY UNS AT   5
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 20

STEREO ATTRIBUTES: NONE
L93   7961 SEA FILE=REGISTRY SUB=L89 SSS FUL L91
L94   STR

```
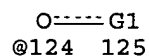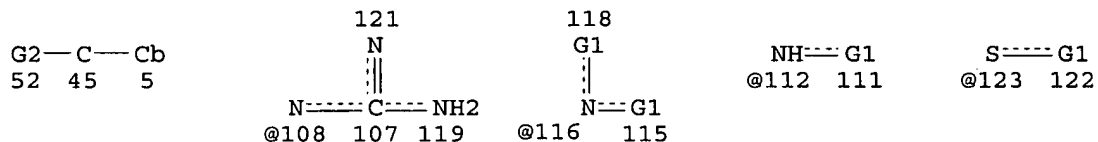              121           118
 G2—C—Cb      N             G1            NH⋯G1         S⋯G1
 52 45  5     ‖             ┆         @112 111      @123 122
        N⋯⋯C⋯⋯NH2       N⋯G1
        @108 107 119     @116    115
```

```
 O⋯⋯G1
 @124 125
```

VAR G1=AK/CY
VAR G2=108/116/112/123/124
NODE ATTRIBUTES:
DEFAULT MLEVEL IS ATOM
GGCAT   IS MCY UNS AT   5
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:
RING(S) ARE ISOLATED OR EMBEDDED
NUMBER OF NODES IS 16

STEREO ATTRIBUTES: NONE
L96   4820 SEA FILE=REGISTRY SUB=L89 SSS FUL L94
L97   11342 SEA FILE=REGISTRY ABB=ON PLU=ON (L93 OR L96)

=> d his

        (FILE 'HOME' ENTERED AT 06:54:13 ON 12 APR 2005)
                SET COST OFF

ACCESSION NUMBER: 2002:127034   CAPLUS
DOCUMENT NUMBER: 137:32933
TITLE: Perfluoro-tagged benzyloxycarbonyl protecting group
                           and its application in fluorous biphasic systems
AUTHOR(S):   Schwinn, Dominik; Bannwarth, Willi
CORPORATE SOURCE: Institut fur Organische Chemie und Biochemie,
                           Universitat Freiburg, Freiburg, D-79104, Germany
SOURCE: Helvetica Chimica Acta (2002), 85(1), 255-264
                           CODEN: HCACAV; ISSN: 0018-019X
PUBLISHER: Verlag Helvetica Chimica Acta
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S):   CASREACT 137:32933

AB   The synthesis of a new perfluoro-tagged benzyloxycarbonyl protecting group
      is reported, as well as its application in the parallel protection of
      amines. Isolation of the protected amines was performed by simple
      liquid-liquid extraction between perfluorinated and organic solvents.
Deprotection
      was achieved by standard hydrogenolysis. The novel protecting group was also
      applied to cyclization protocols leading to quinazoline-2,4-diones. These
      products were isolated by simple extraction procedures.

IT   **436855-64-0P**
      RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
      (Reactant or reagent)
          (perfluoro-tagged benzyloxycarbonyl protecting group and its
          application in fluorous biphasic systems)
RN   436855-64-0 CAPLUS
CN   Carbonochloridic acid, [4-[tris(3,3,4,4,5,5,6,6,7,7,8,8,8-
      tridecafluorooctyl)silyl]phenyl]methyl ester (9CI)   (CA INDEX NAME)

REFERENCE COUNT: 33   THERE ARE 33 CITED REFERENCES AVAILABLE FOR THIS
                                 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT